15.5. Percentage of female admissions whose insanity is due to syphilis, 6.1. Percentage of admissions (male and females) whose insanity is due to syphilis, 10.4. The much larger figures for admissions over inmates are due to the short period of survival of cases admitted for syphilitic mental disorders.

Venereal Disease Incidence at Different Ages.—King and Sydenstricker (*Public Health Reports,* 1920, xxxv, 3091) summarize their studies as follows: (1) For the purpose of throwing some light upon the question of the age incidence of venereal infections, and in the absence of complete data for any definitely and accurately observed population group, certain tabulations were made of approximately 8400 case reports of venereal diseases among white persons in Indiana.

(2) Considering these cases as fair samples of the total cases of that type which actually exist in the population under consideration, indices of venereal disease incidence according to age of onset were computed for persons of both sexes and of different marital condition by adjusting the age distribution of cases to that for the population of Indiana in 1910. (3) While the data cannot be considered conclusive, they suggest the following points: (*a*) The greatest incidence of venereal infections occurs in early adult ages, between seventeen and twenty-five. This is true of both males and females. (*b*) The incidence of venereal infections is earlier among females than males. The modal or peak age for females is nineteen years, while that for males is approximately twenty-one years. (*c*) While the data are not definite on this point, the evidence suggests that among persons married at the time of report, venereal infections were largely premarital in the case of males and postmarital in the case of females. (*d*) There is a wide divergence in the incidence curves for males who were married previous to the time of report and for males who had remained single. In the one case, infections were confined chiefly to the younger adult ages (under twenty); in the other, the incidence in the adult ages (twenty to twenty-four) was considerably higher than in the younger ages. The effect of marriage apparently was to greatly lessen the incidence of venereal infection among males. (*e*) Gonorrhea apparently occurs at slightly younger ages than syphilis or chancroid among both males and females. (4) In view of the limitations of the data with respect to the number of cases reported, the stage at which disease was reported, the possible errors in determining accurately the age at which infection occurred, and the use of the 1910 age distribution of population, these observations cannot, of course, be regarded as definitely conclusive.

Studies on the Lethal Action of Some Meningococci on Mice, with Special Reference to the Protective Properties of Antimeningococcic Serum.—Neill and Taft (*Hygienic Laboratory Bulletin,* November, 1920, p. 93) endeavored to determine the value of protection tests as a method of estimating the therapeutic value of antimeningococcic serum. It was found that dead meningococci were about as fatal for mice as were living ones, though large doses were required in either case. The method does not show relative value except when practically the difference is very great. The irregular results do not lend encouragement to the use of the method for practical purposes.

Report on Investigation of Typhoid Fever Epidemic at Greenville, Tenn.—HARRUB (*Public Health Reports*, 1921, xxxvi, 72), a Sanitary Engineer, reports an outbreak of 61 cases with seven deaths due to contaminated spring water used as a municipal supply. The supply was treated with hypochlorite but the disinfectant was not properly employed, and analysis of the water showed it to be of a poor sanitary quality.

The Tropin Reactions of Antimeningococcus Serum.—EVANS, (*Hygienic Laboratory Bulletin*, November, 1920, p. 43) gives the following summary of the work reported: The phagocytic test for bacteriotropins is a workable test which distinguishes clearly between a normal serum and a serum containing the specific antibodies. The important phagocytic antibodies in meningococcus serum are bacteriotropins. That is, they are not dependent upon complement for their activity. A high concentration of tropins does not inhibit phagocytic action, but there is in serum a poisonous substance active against leukocytes of a foreign species, which suppresses phagocytic activity in low dilutions of the serum. No stains of meningococci were found which resisted phagocytosis after treatment with serum containing the specific tropins. All strains of meningococci tested produced tropins in inoculated rabbits. But not every inoculated rabbit produced tropins, presumably because of individual differences in the animals. Some strains regularly produced tropins in higher titer than other strains. After long artificial cultivation meningococci may lose their tropinogenic power, and their power to respond to active tropins. The tropin reactions of meningococci are specific, dividing them into well-defined groups, with no cross-reaction between the typical strains of the main groups. Sixty-three strains of meningococci were available for classification according to their tropin reactions. They were divided into four distinct groups, designated R, S, T, and U. Group R included 61.9 per cent. of the strains; group S included 25.4 per cent. of the strains; group T included 4.7 per cent. of the strains and group U included 1.6 per cent. of the strains. Groups R, S, T, and U are distinct groups. Every strain belonging to those groups was equal to every other strain of the homologous group in its power of absorbing tropins from serums of the homologous group. The typical strains of groups R, S, T, and U did not absorb tropins specific to a heterologous group. But 4 atypical strains were found which did, in a slight degree, absorb tropins of another group. A fifth group (Z) included 6.4 per cent. of the total number of strains of meningococci. Unlike the other four groups, group Z is not distinct but is related to the others. This relationship is shown by a partial absorption of tropins specific for those groups. Moreover, the strains of group Z differ in their relationship to one another, and they differ in their relationship to the four main groups The strains of group Z are further distinguished by a tendency to spontaneous phagocytosis. In the majority of immune serums a good tropin content is accompanied by a good agglutinin content. But agglutinins may be produced without tropins, and tropins may be produced without agglutinins. Under unfavorable conditions the deterioration of agglutinins and tropins did not follow a parallel course. Certain conditions destroyed the action of the agglutinins without injuring the tropins, and other conditions destroyed the action of the tropins without injuring the agglutinins. One hundred and twenty-eight commercial serums were tested for their content in tropins. The tropin content was compared with the agglutinin content as determined in the official test. The results of the two tests agreed for 71.8 per cent. of the serums. For the remaining 28.2 per cent. the results were discordant.

Differentiation between Various Strains of Meningococci by Means of the Agglutination and the Absorption of Agglutinins Test.—BUTTERFIELD and NEILL (*Hygienic Laboratory Bulletin*, November, 1920, p. 9) present their Summary and Conclusions as follows: (1) Classification of strains according to their geographic distribution is not possible. (2) When the agglutination test with type serums prepared from Gordon's types was applied to the Hygienic Laboratory strains, 90 per cent. of them were classified without further work. (3) If the meningococcus suspension agglutinates in a titer of 1 to 100 or higher, with only one of the type serums, provided the homologous coccus agglutinates in over 1 to 400, it may , in 100 per cent. of the cases, be classified at once without resorting to the absorption test. (4) If a meningococcus suspension agglutinates with two or more type serums in equal titer, it may in 100 per cent, of the cases be classified by the absorption test. (5) If a suspension agglutinates with two or more type serums in unequal titer the highest titer probably indicates the type. This was true in 77 per cent. of the cases tried. (6) In the monovalent serums tried the complement-fixation bodies have the same specificity as the agglutinins, the complement-fixation titer being, as a rule, somewhat higher than the agglutination titer. (7) During the course of a year's time the apparent changing of certain strains of meningococci from one type to another has been observed.

The Fate of the First Molar.—BUTLER (*U. S. Public Health Reports*, 1921, xxxvi, 434) states that it is a generally conceded fact that the human tooth is undergoing a process of involution due to lack of hard usage. Recent investigations by the U. S. Public Health Service not only bear out the above statement but furnish also much food for serious thought. The first molar, the first permanent tooth to make its appearance in normal dentition, is easily the most important tooth in the mouth. Not only does it present the largest masticating surface but it also largely determines the position of the other permanent teeth to follow it in eruption. In the examination of 6388 children the age varied from six years, or the year of the appearance of the first molar, to seventeen, or ten years after the eruption of this tooth. The first molar was found to be the most neglected of all the permanent teeth and the one most frequently lost. One reason ascribed to these facts is given as a failure on the part of parents to recognize this tooth as other than one of the deciduous set. Among the children of six years, the year of the eruption of this tooth, 4.8 per cent. of all these molars was found to be undergoing carious processes. This means 14.3 per cent. of all the six-year-old children were found to have one or more of these molars defective. Five years later 9 per cent. of all six-year molars were found to have been extracted or to be appearing as necrosed roots; 54.5 per cent. of all children of this age examined were found to have one or more defective or missing first molars, regardless of such as had received professional attention. In order to determine the possibilities of successful prophylactic measures 1000 carious areas in first molars were plotted as to the location in which they occurred. For this purpose only the mouths of children of from nine to twelve years were considered, this for the reason that during this period the tooth would have been in position from three to five years, during which period no tooth would be contiguous to it upon the distal surface but upon the mesial there would have been a deciduous tooth. Thus the distal surface would have had the advantage of being polished in mastication, an advantage which could not be enjoyed by the mesial surface because of the presence of the deciduous tooth. The following findings were thus obtained: Occlusal cavities, 877; mesial cavities, 110; distal cavities, 8; buccal cavities, 3; lingual cavities, 2; total, 1000. It would appear that the difference between 110 and 8 would indicate the advantage of the distal surface over the mesial as a result, the abrasion of this surface by mastication, but as seen, the preponderance of cavities occurs upon the masticating surface, in the fissures or sulci. To faulty development is ascribed the large proportion of occlusal cavities. This seems to be of three types: (1) an arrest in the deposit of enamel at this point; (2) a lack of calcification in the enamel and (3) a failure of union when the enamel rods approximate each other in a more or less horizontal position. The writer urges a specialization in care of children's teeth and a systematic encouragement of early visits to the dentist, pointing out that only by early detection and most careful operative procedures may this important tooth be preserved for the necessary years of usefulness.

Epidemic Encephalitis (Encephalitis Lethargica, Nona). — SMITH (*U. S. Public Health Reports*, 1921, xxxvi, 207) made an investigation of epidemic encephalitis which he summarizes as follows: (1) Clinically the disease presents a series of symptoms which are found in no other affection. (2) The lack of positive epidemiological data renders the determination of the length of an incubation period impossible. (3) The clinical course of the disease may be divided into three stages: A prodromal period with fatigue, lethargy, headache, giddiness, and disturbances of vision; the stage of acute manifestations, with vomiting, fever, paralysis of certain cranial nerves, changes in tendon reflexes, alterations in speech, marked general weakness, and, in the majority of cases, coma of varying intensity; and the period of convalescence, which varies. In some cases recovery is complete within ten days or two weeks after the subsidence of the acute symptoms. In other cases, however, convalescence is prolonged and is accompanied by changes in the mental state, definite loss of function of certain muscles, and obstinate palsies of the cranial nerves. (4) There was a distinct outbreak of the disease in the United States during the latter part of 1918 and the early part of 1919. Beginning with the first case in the city of New York in September, 1918, there was a gradual increase in the monthly incidence up to and including March, 1919, during which month 61 cases occurred. This was followed by a sharp break with only 12 cases in April and 5 in May. (5) The age distribution of the cases